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GEOGRAPHICAL RECORD

THE AMERICAN GEOGRAPHICAL SOCIETY

Meeting of the Association of American Geographers and the American Geographical Society. The second joint meeting of these societies was held in the house of the American Geographical Society on Friday and Saturday, April 9 and 10. Our house was entirely at the service of the visiting geographers and about one-half of the members of the Association were present. In scientific and social interest the occasion was most successful. The visiting geographers were the guests of the American Geographical Society at the Park Avenue Hotel, where a pleasant reunion was held on Thursday evening. On Friday and Saturday our Society served noon-day luncheons to its guests and to the members of the Physiographers' Club, who were included with our own members in the invitation to attend the sessions. Our guests were much interested in the Society's exhibition of maps illustrating the progress of the war; in two block diagrams, by Professor D. W. Johnson, of the physical features of the eastern and western war fields; and in the maps loaned by Mr. N. H. Darton showing the geology of the Grand Cañon based on Mr. Matthes's sheets, and by Dr. Baker of the U. S. Agricultural Department of eight manuscript sheets of the forthcoming Agricultural Atlas of the United States. On Friday evening the geographers were delightfully entertained at the residence of Mr. George A. Plimpton of this city, when Mr. Plimpton exhibited and commented upon many specimens of his large collections of manuscripts and books illustrating early American geography.

Vice-President John Greenough opened the Friday morning session with the following remarks:

"GENTLEMEN OF THE ASSOCIATION OF AMERICAN GEOGRAPHERS: It is my privilege, in behalf of the American Geographical Society, to welcome you once more to our home in this city and to recall the agreeable memories of our gathering here a year ago. The interval has been marked by steady continuance in the unobtrusive activities of our Societies, both of which have escaped, I am happy to say, any serious inconvenience from the clash of opposing hosts in Europe. But the dreadful clouds of the war oppress the spirits of all observers, and we especially deplore the anxieties, suffering and loss which must have been sustained by our European brothers in scientific pursuits, many of whom were our guests and companions a little more than two years ago on the occasion of the Transcontinental Excursion of the American Geographical Society. I trust that it will not be deemed inappropriate that I should make this avowal of our earnest sympathy with each and all of them regardless of the unhappy differences which have entailed the great tragedy now occupying the continental arena.

"The universal interest felt in this community in the study of the geography of the war has been evinced by the numbers who have sought information from our maps and collections. Visitors by the tens of thousands have called upon us during the recent months and have found desired knowledge or stimulus to further inquiry. An observation of the mental attitude of many of these to whom evidently a suggestion of the pleasure and value in geographic knowledge was made manifest for the first time, lends encouragement to the conviction, which has always animated our Society, that the field of geographic inquiry as at present defined opens to the student an inviting field for intellectual enjoyment and diversified interest. The science no longer confines itself to the question 'Where,' but adds the interrogatories 'Why and How;' in other words, the sphere of the geographer is allowed to include not merely topography and physical attributes, but practically every phase of creation upon this planet, including mankind and his development. What wider or more enticing avenue could be presented to a sympathetic intelligence? To point the way and assist proselytes in its pursuit must always be one of the chief ambitions of our Society, and, as I believe, of all you gentlemen. And in this connection I may with propriety announce that an agreement has been made with your accomplished and devoted Secretary, Professor Bowman, whereby, after July 1, he is to join the staff of the American Geographical Society, as Director and Librarian. Our Society regards this arrangement as most auspicious, for not only do we hope to benefit from his scholarship, administrative ability and acquaintance, but we trust that his accession may be the means of strengthening the ties which already unite us to your Association.

''The programme of the meeting is varied and of exceptional interest. Its character and the numerous and distinguished attendance here present assure the success of our gathering. I am sure that some of the speakers must be already straining at the leash, and I am conscious that I block the way. Therefore, with renewed greetings, I yield my place and make my submission to your newly elected and ever-distinguished President, Professor Dodge.''

Professor R. E. Dodge, President of the Association, presided and the audience room was crowded at every session.

The programme included nine papers, all but one of which was illustrated. Discussion followed the reading of most of them.

The speakers and titles were:

W. M. DAVIS: The Coast of New Caledonia.
H. E. GREGORY: Geography of the Navajo Country.
MARK JEFFERSON: Utah, the Oasis at the Foot of the Wasatch.
C. S. SCOFIELD: The Geographic Factor in Agricultural Industries.
N. H. DARTON: Origin of Some Desert Basins.
M. L. FERNALD: The Natural History of Ancient Vinland and its Geographic Significance.
BAILEY WILLIS: Argentina and the Argentines.
R. DEC. WARD: Winter Weather as a Factor in the Great War.
LAWRENCE MARTIN: The Muir Glacier in 1911 and 1913.

A number of the papers will be printed in the *Bulletin* in whole or in part. The two days' sessions were regarded as surpassing even last year's fine meeting in interest and value.

Meetings of the Society. A meeting of the Society was held at the Engineering Societies' Hall, No. 29 W. 39th Street, on Tuesday evening, March 23, at 8:30 o'clock. Vice-President Greenough in the chair.

The following persons recommended by the Council were elected Fellows:

Ruth Kedzie Wood, Cherry Valley, N. Y.
Augustus Van Cortlandt, Sharon, Conn.
Charles C. Goodrich, Orange, N. J.
Horace Holden, Morristown, N. J.
C. F. Brooks, Washington, D. C.
Charles B. Slaughter, New York City.
George W. Thomson, New York City.
L. A. Cushman, New York City.
Mary Cadwalader Jones, New York City.
Angela Gallagher, New York City.
B. R. Baumgardt, New York City.

Mr. Harry Clarke Ostrander then addressed the Society on ''From Cairo to Constantinople.'' His lecture was illustrated by moving pictures and lantern views.

On Tuesday evening, April 6, an extra inter-monthly meeting was held at the Engineering Societies' Hall, at which Mr. Herbert Lawrence Bridgman, President of the Department of Geography of the Brooklyn Institute of Arts and Sciences, addressed the Society on ''Bulgaria,'' with lantern illustrations.

NORTH AMERICA

Earthquakes at Charleston. Mr. Stephen Taber, who has been investigating the earthquake history of the Charleston earthquake district and has published his results (*Bull. Seis. Soc. America,* Vol. 4, 1914, pp. 108-160), finds records of not more than eight shocks, only two of them strong, during the two centuries preceding the great Charleston earthquake of August 31, 1886. Many shocks have occurred, however, since that earthquake. From 1886 to 1897 there were 318 shocks and from 1898 to 1913, 77. Mr. Taber's study as to the effects of meteorological and astronomical phenomena on the frequency of these earthquakes leads him to believe that most of them are due to adjustments along a fault running from near Woodstock in a northeast to a southwesterly direction. Many of the minor shocks, however, he believes are caused by the adjustment of stresses set up by the more important movements. Changes of pressure which differently affect the rocks on the northwest and southeast sides of the fault are the chief factors influencing the frequency of earthquakes. He regards rainfall, the level of the underground water-surface, and the barometric gradient as the most important of these factors; and he thinks the changes in sea-level, variations in sun-spot frequency and the attraction of the sun and moon as of no particular consequence.

Work of the Coast and Geodetic Survey. Work will begin in June on an arc of primary triangulation which will extend northwesterly from the thirty-ninth parallel triangulation near Great Salt Lake and connect with the northern end of the California-Washington arc. This triangulation will close another large loop and will give a much-needed primary control to the mountainous regions of southern Idaho and eastern Oregon. Assistant C. V. Hodgson will be in charge of the main party and all the observing will be done by him. Motor trucks will be used instead of teams for transporting the parties in the field.

In 1912 an arc of primary triangulation was measured from the thirty-ninth parallel near Denver north to the Canada boundary approximately along the 104th meridian. It is now planned to continue this triangulation south to the Texas-California arc and thus not only divide the great southwestern loop of triangulation into two parts but also complete the measurement of another great meridian from Canada to Mexico.

Another Study of the Ohio Valley Flood. One of the best reports of the flood in the Ohio Valley (March, 1913) is issued by Indiana University.[1] The study is confined to the drainage area of the White River, which covers over 11,000 square miles in southern Indiana. The first part deals with the laws of streams and general conditions of floods; the second gives the result of observations along the White River; the third dismisses in ten pages a wide range of flood subjects; and the fourth is an excellent résumé of the text. The pages devoted to observations are the most valuable feature; such topics as damage to soil and the effects of erosion and deposition, the quantity and distribution of sand, gravel and silt deposits, bank cutting, the effect of trees on bank cutting and on deposits and the effect of grass-sod on erosion are considered; and they make the study of a limited area especially valuable. A few paragraphs, unusual in reports of large areas, augment the value of the pamphlet; one covers the relation between flood and sickness, and though the result of the inquiry was not conclusive, the investigation was worth while. That excessive rainfall was the only cause of the flood, that railroad bridges are usually too small and restrict the flow of water, and that the flood occurred at a season when a minimum amount of damage to growing crops is incurred agree with reports from other areas. In the area studied 7,850 acres were denuded, 160 acres were lost by bank cutting, 1,520 acres were badly covered with sand and gravel and 15,600 acres were covered with silt. The estimated damage to soil alone is placed at $246,500, and the cost of replacing the structures damaged or destroyed is estimated at nearly $500,000. The report supplements in an admirable way the already published accounts of this unusual flood.

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[1] H. P. Bybee and C. A. Malcott: The Flood of 1913 in the Lower White River Region of Indiana. *Indiana University Studies, 22.*

ROBERT M. BROWN.

Forest Influences upon Climate. The United States has thus far contributed little original observation to the much-discussed question of the influence of forests upon climate. A study along these lines has been made by G. A. Pearson, Forest Examiner, whose results are presented in "A Meteorological Study of Parks and Timbered Areas in the Western Yellow-Pine Forests of Arizona and New Mexico" (*Monthly Weather Review,* October, 1913). The object was to determine the influence of the forest cover upon the local climate in the Southwest in so far as this influence might be important in the management of timber lands, and the possible afforestation of parks and denuded areas. The meteorological observations were made at "parallel" stations, in the European fashion, the instruments being of standard Weather Bureau type, installed and operated under the direction of that bureau. These observations show that the influence of the forest is similar to that already indicated for Europe, except in the case of the relative humidity, for which the data are inadequate. The Arizona and New Mexico forests modify the extremes of temperature, reduce wind velocity, decrease evaporation, and do not have an appreciable influence upon precipitation except in connection with the distribution and the disposal of the snow or rain. R. DEC. WARD.

Better Protection against Forest Fires. *American Forestry* (Vol. 21, 1915, pp. 47-50) says that of the 6,112 fires reported up to Dec. 1, 4,954, or 81 per cent., were extinguished by the protective organization before they had covered ten acres. This is the best record in the history of the service. Preliminary estimates show that the area burned over will probably not exceed 300,000 acres. The larger part of this area was on old burns and on brush and grass land. In fighting the fires the effort was to keep the fire as far as possible out of green timber. The effort was very successful, for the total damage to green timber was probably not over $450,000. This is in marked contrast to 1910, when 6,500,000,000 feet of timber were burned, valued at over $10,000,000.

The success in preventing large disasters during the past season was due to preparedness to meet emergencies. In the past four years great progress has been made in equipping the forests and in the organization of the fire force. During this time there have been added 1,368 miles of roads, 9,617 miles of trail, 12,000 miles of telephones, 300 new fully equipped lookout stations, 695 headquarters buildings, and many other improvements. The greatly improved organization of the fire force has also been a large element in reducing the amount of damage.

New Welland Ship Canal. The Welland Canal is one of the oldest and most important of the artificial waterways of Canada. It has been of great service as a channel of communication between Lakes Erie and Ontario and in the regulation of railway freight rates. It is west of the Niagara River in Ontario, and extends from Port Colborne, on Lake Erie, to Port Dalhousie, on Lake Ontario, twenty-five miles. At the time of its completion it was capable of carrying the largest vessels then doing business on the Great Lakes, but to-day few of the regular freight boats can use it, and for this reason the Canadian Government constructed at Port Colborne a grain elevator of 2,000,000 bushels capacity to transship grain from the larger to the smaller vessels. When the new canal is in operation this economic waste in transshipment will be obviated, and cargoes of grain and other heavy freight may pass from the extreme limits of the Great Lakes either way.

The new Welland Ship Canal, on which construction is now under way, will have a length of twenty-five miles. According to the *Monetary Times,* of Toronto, its width at bottom will be 200 feet and at the water line 310 feet, the depth on the sills being thirty feet. There will be seven locks, each 800 feet in length. Each will have a lift of 46½ feet, making a total lift of 325½ feet. The canal, for which all the contracts have been let, is to be finished by 1918 at a cost of $50,000,000, all of which is to be borne by the Dominion Government. At present 2,000 men are excavating the northern end of the canal. The bulk of the freight traffic to be handled on the new waterway will be grain, though there will be enormous quantities of coal and other bulk freight destined for upper Lake ports. The canal will be free to all vessels using it, and will benefit the United States as well as the Dominion of Canada.

CENTRAL AMERICA AND WEST INDIES

Climate of Porto Rico. Dr. Oliver L. Fassig, of the Maryland State Weather Service, is preparing a final report on the climate and weather of Porto Rico and hopes to complete the work this summer. He has published in the past three years a number of preliminary papers on the climate of the island. The coming report will form a comprehensive study of all the data recorded during the past fifteen years under the auspices of the U. S. Weather Bureau at about fifty stations in Porto Rico.

ASIA

Glacial Phenomena in the North Japanese Alps. Professor K. Oseki, in the *Scottish Geographical Magazine* (March, 1915, pp. 113-120), says that up to the present time evidences of glaciation in Japan have been obtained only from the occurrence of corries and morainic ridges in the northern Hida Mountains. Alpinists believe that in the South Japanese Alps (the Akaishi and Kiso Mountains) the highest peak of which, Akaishi San, has an altitude of 10,140 feet, traces of glaciers have been detected, but Professor Oseki cannot confirm this from his own observations. The traces of glaciation in the northern Hida Mountains are not very striking, but during the glacial period small hanging glaciers must have descended to a level of about 8,200 feet above the sea. Moraines with striated boulders, striated surfaces and roches moutonnées have hitherto not been identified with certainty in the corries. At the lowest point the elevation of the corrie floors is about 8,200 feet above sea level, and it is assumed that this was the altitude of the snow line during the glacial period. As the highest peak of the mountain chain (Yarigatake, 10,426 feet) does not reach the snow line of the present day, we must conclude that the depression of the snow line during the glacial period was not less than 2,300 feet.

AUSTRALASIA AND OCEANIA

A Harvard Expedition to the Fiji Islands. Prof. R. A. Daly informs us that another grant from the Sheldon Fund has enabled the Department of Geology in Harvard University to plan an expedition to the Fiji Islands. Mr. W. G. Foye, candidate for the Doctor's degree in geology this year, and Mr. W. M. Mann, of the Bussey Institution, have been appointed, respectively, as geologist and zoologist of the expedition. The primary purpose will be to secure any new data regarding the origin of coral reefs, the composition and physiography of volcanic islands, and the problems of zoogeography. A period of from nine months to one year is planned for the expedition.

EUROPE

The White Sea Route. As the Baltic and Black Seas are not available for the Russian export trade at present, there remains only one sea route, the White Sea, which was, in fact, the only commercial highway by sea between Russia and England in the sixteenth century and continued so for over 150 years. At that time, England exported to Russia manufactured goods in exchange for furs, walrus tusks and other raw materials. The *Izvestiya* of the Archangel Society for the Exploration of the Russian North (Vol. 6, 1914, No. 18, pp. 602-605) says that, should the war be prolonged, the port of Archangel will become indispensable for exports of perishable goods and imports of surgical instruments, drugs and other supplies for the army.

Archangel as a seaport has some drawbacks, such as the interruption of navigation in winter, the length of the voyage to western Europe, the bar at the mouth of Northern Dvina, and the restricted freight capacity of the narrow-gauge railroad between Vologda and Archangel. The question of using Archangel as a port during the war has been taken up by the Russian Chamber of Commerce and the Russian-English Commission organized to facilitate commercial exchanges between Russia and England. The Commission believes that the Government should permit exports through Archangel to friendly neutral countries of such goods as may be spared without imperiling the army supplies and domestic markets. Butter, eggs and cheese should be put on the list of exports. The value of the butter exported from Siberia, before the war, was 80,000,000 roubles annually, but, under present conditions, this commodity is almost worthless. The narrow-gauge railroad from Vologda should be rebuilt without delay, and freight rates and duty on exports should be fixed at a very low figure. The Commission has advised the Government to adopt these measures.

The Sun (April 15) reports that Russia now has direct cable communication with Great Britain. From England the line extends across the North Sea, and along the coast of Norway and the northern coast of Europe to Alexandrovsk on the Murman coast. The laying of the cable was completed in eleven days and is considered a remarkable piece of work. H. de H.

POLAR

Arctic

Emperor Nicholas II Land Reported to be 100 Miles Wide. A letter received by Mr. Herbert L. Bridgman from Gen. de Schokalsky, dated Petrograd, Feb. 14, 1915, says: "Our Arctic Expedition under the command of Captain B. Vilkitzsky of the Imperial Russian Navy is now at their winter camp on the west side of the Taimyr Peninsula. During this cruise they have discovered another little island south of Bennett I. and demonstrated that the Land of Emperor Nicholas II. has a width of 100 miles. The strait between it and the Chelyuskin Cape is only thirty miles wide."

Nature (March 4, 1915) says that the fact that Captain Vilkitzsky was in Taimyr Bay to the west of Cape Chelyuskin was made known by a wireless message from him that was "picked up by Captain Sverdrup, who is laid up further to the southwest on the same inhospitable coast. Captain Vilkitzsky having set out in July last from Vladivostok to make the passage to European Russia has thus accomplished about three-fifths of the voyage along the Russian Arctic coast. He proposes to send some of his men to Sverdrup, thus relieving the pressure upon his supplies, for he has encountered such heavy ice conditions hitherto that it does not seem certain that he will be able to get on with his ships next summer. The expedition has ample opportunity to add to geographical knowledge (as it has done already) on the coast where it is now imprisoned."

WORLD AND PARTS OF IT

North Atlantic Ice Patrol, 1915. *Hydrographic Bulletin* (No. 1,331) says that on Feb. 15 the U. S. Coast Guard cutter *Senator* left New York for the Grand Banks of Newfoundland to locate the ice fields and positions of the icebergs. When the ice moves southward so as to make a constant patrol necessary, an additional vessel will be detailed for that purpose. The experience of the past two years shows that a continuous ice patrol should begin about April 1 and continue throughout the season of dangerous ice conditions.

Distribution of the Jews. According to *Deutsche Rundschau für Geographie* (Vol. 37, No. 2), there are 11,871,783 Jews in the world, of whom 8,942,266 live in Europe, 1,894,409 in America, 522,635 in Asia, 341,867 in Africa and 17,106 in Oceania. Of the European Jews, 5,110,548 live in Russia, 1,224,899 in Austria, 851,378 in Hungary, 607,862 in Germany, 282,277 in European Turkey, 266,652 in Rumania, 238,275 in England, 105,968 in the Netherlands, 100,000 in France, 52,115 in Italy, and 33,663 in Bulgaria. Of all cities, New York has the largest Jewish population with 1,062,000. Warsaw comes next with 254,712 or 35.8 per cent. of its population; Budapest, 186,047 (23.5 per cent.), Vienna, 146,926 (8.8 per cent.), London, 144,300 (2.1 per cent.), Odessa, 138,935 (34.4 per cent.), Berlin, 98,893 (4.8 per cent.), Lodz, 98,671 (31.4 per cent.), Chicago with a round 80,000, Saloniki and Philadelphia, 75,000 each, Paris, 70,000, Constantinople, 65,000, Vilna, 63,841 (41.3 per cent.) and Amsterdam, 59,065 (11.5 per cent.)

METEOROLOGY AND CLIMATOLOGY

Temperatures, Sunspots and Volcanic Eruptions. Köppen, more than forty years ago, began a study of a possible relation between the eleven-year sunspot period and terrestrial weather conditions. He has recently summarized his later investigations (*Meteorol. Zeitschr.*, Vol. 31, 1914, pp. 305-328), and finds that the eleven-year oscillation in temperature now seems smaller, but much more regular, than he determined it to be in 1873. In all of the latest sunspot periods, for which the temperatures are known for about one-sixth of the earth's surface, the mean temperature at the time of sunspot minimum, or soon after, was about 0.5° C. higher than in the years following the sunspot maximum. When smaller portions of the earth's surface are considered, this regularity is masked; the eleven-year periodicity in temperature appears to be more marked in some periods, and to disappear in others. The districts with positive temperature departures are larger and more intense at times of sunspot minima; those with negative departures are larger and more intense at times of sunspot maxima. It seems to be "chance," and almost independent of the sunspot period, what places fall into one or the other area. The eleven-year cycle, Köppen says, is the first definitely established period in weather phenomena. The source of this temperature-periodicity is thought by Humphreys to lie in a decrease of radiation at the time of sunspot minima in consequence of the formation of ozone in the higher atmosphere. The question of the effect of volcanic dust upon the receipt and loss of radiation also enters into the problem, and a relation between air temperatures and volcanic eruptions has recently been shown to exist by Abbot and Fowle, and by Humphreys. It is obvious that the problem is by no means solved, as yet, and offers an interesting subject for further investigation. R. DeC. Ward.

Popular Weather Fallacies. In the *Popular Science Monthly* for February, Andrew H. Palmer, of the U. S. Weather Bureau, has considered some "Popular Misconceptions concerning the Weather." A score or more of the most widespread notions are briefly discussed. The confusion of truth and falsehood is pointed out. And what is known regarding actual meteorological facts is set over against the popular, traditional, belief.

From early years all of us make some sort of crude weather observations, and begin to accumulate a store of weather proverbs and weather lore. This, because handed down from generation to generation, seems to have stood the test of years, and is therefore generally accepted as authoritative. Few sciences are hedged in with more popular misconceptions than is meteorology. There is need, at frequent intervals, and in all countries, of simple and direct presentation of some of the fallacies in the prevailing popular notions regarding weather controls and weather prognostics. R. DeC. Ward.

EDUCATIONAL GEOGRAPHY

Geography in the Summer Schools

The institutions mentioned below will send their Summer School announcements to those interested

Colorado. The University of Colorado, Boulder, Col., will have its first summer school (June 28–August 6) of geology and geography. Miss Ellen Churchill Semple has been secured for two courses of lectures, one on the general principles of anthropogeography and the other on the geography of the Mediterranean Basin in relation to its history. The lecture courses of six weeks will be followed by field study of life under semi-arid conditions in southwestern Colorado. Prof. William B. Scott, Princeton University, will have courses in historical geology and stratigraphy. Associate Prof. Walter E. McCourt, Washington University, will have courses in principles of earth science, field geology, economic geography, and a teachers' course in geography. A geological excursion through Colorado (Aug. 7–Aug. 28) will be conducted by Associate Prof. McCourt.

Illinois. University of Chicago. The summer session will begin on June 21. The geographical courses are: Teachers' course in geography, an introductory study for teachers in secondary and primary schools, Miss Lanier; Physiography, the earth's features, agencies affecting them, etc., with elements of meteorology and oceanography, Prof. Salisbury and Assistant Prof. Bretz; Economic and commercial geography, Dr. Jones and Miss Lanier; Elements of meteorology, general principles of meteorology, elements and controls of weather, etc., Mr. Reed (University of California); Climate of North America, with special reference to the United States, Mr. Reed; Geography of Europe, Associate Prof. Goode; Influence of geography on American history, for teachers of geography and history, Prof. Barrows and Miss Lanier; Economic geography of the United States, the physiographic regions, climates, natural vegetation, agriculture, etc., Associate Prof. Goode; Conservation of natural resources as factors in national development, etc., Prof. Barrows; Geographic geology (advanced physiography), Prof. Salisbury and Assistant Prof. Bretz; Geographic influences in the history of the Western States, geographic conditions which have influenced the economic, social, and political history of the area, the effect on national development, etc., Prof. Barrows; Research course, advanced work on selected topics for students prepared for semi-independent work, Profs. Salisbury and Barrows and Associate Prof. Goode. Four courses are offered in field geography: (1) The environs of Chicago (primarily a study in human geography, based on field trips), five weeks commencing July 22, Dr. Jones; (2) in southwestern Wisconsin near the Mississippi Valley (an introduction to methods of regional geographic work), four weeks commencing June 21, Dr. Jones; (3) in the vicinity of Devil's Lake, Wis. (includes training in stratigraphic, surficial, and field determinations, mapping, sketching, and technical description), three classes beginning June 21, July 22, and September 3, respectively, Prof. Trowbridge, Mr. Bevan, and Asst. Prof. Bretz; (4) a course in the West for advanced students, for the most part along the Union Pacific and Southern Pacific railroads, leaving Chicago Sept. 3 and returning Oct. 2, Associate Prof. Goode.

Indiana. State Normal School, Terre Haute. In the first term of the summer school (May 24-Aug. 13) these courses are offered: elements of geography: physiographic processes, features of the earth and their relation to life, C. O. McFarland; regional geography: major natural regions of the earth, Mr. McFarland; economic and commercial geography, W. A. McBeth; North America: regional and historical geography, Mr. McFarland; geographic influences in American history, B. H. Schockel; history of the earth and its inhabitants, Mr. McFarland; the second summer term (June 21-Sept. 10) will include the above features, excepting North America, for which the regional geography of Asia, by Mr. Schockel, is substituted.

Louisiana. LOUISIANA STATE UNIVERSITY. Dr. F. V. Emerson, Professor of Geology in the University, will conduct a field course in geology in the Asheville, N. C., region. The journey to the field will be taken by daylight and class observation from trains will be required. The party will stop at Birmingham, Ala., to study the coal and iron mines and at Chattanooga, Tenn., to observe the formations and physiography of that region. The field in North Carolina includes the folded rocks of the Ridge Belt and the igneous rocks of the Asheville Basin.

Maryland. JOHNS HOPKINS UNIVERSITY. In the summer school a short course will be given on ''The Teaching of Geography in the Elementary School,'' by Supt. Leonora E. Taft, of Woodstock, Vermont.

Massachusetts. HARVARD UNIVERSITY. A field course in physiography and general geology will be offered by Harvard University. The party will be under the direction of Prof. Wallace W. Atwood, and will be limited to those who have had at least an introductory college course in physiography or general geology. Early in August the members of the party will meet at Ouray, Colorado. They will go at once into camp, and begin the systematic study of a portion of the San Juan Mountains. For three weeks this work will continue, and the men will be trained in the official methods of field work approved by the U. S. Geological Survey. An expedition will later be conducted through the higher mountains, and possibly over a portion of the neighboring plateau.

Michigan. STATE NORMAL SCHOOL, Ypsilanti. 1. Teachers' geography, Prof. Jefferson and Miss Cawood. 2. Commercial geography, Prof. Jefferson. 3. Geographic lecture plans, Miss Cawood. 4. An elementary course in geography, Miss Cawood.

CENTRAL STATE NORMAL SCHOOL, Mt. Pleasant. A course in regional commercial geography will be given.

Minnesota. STATE NORMAL SCHOOL, Duluth. Two geographical courses, in charge of Mr. Eugene Van Cleef, will be offered at the summer school beginning on June 15 and continuing for seven weeks: (a) geography of North America; (b) geography of foreign countries. Ten local field trips including a variety of geographic topics have been arranged.

STATE NORMAL SCHOOL, Mankato. These courses in geography will be given: 1. Elementary Geography, for students preparing to take examinations for state teacher's certificates, Miss Nellie L. Woodbury; 2. Elementary Physical Geography, designed for the same purpose as Course 1, Mr. Merton P. Fobes; 3. Teachers' Course in Geography, a study of the principles of geography and their relationship to life, with emphasis on the human response to geographic environment, Mr. G. J. Miller; 4. North America, a regional study making application of the principles developed in Course 3, Mr. Miller; 5. Advanced Regional Geography, a semi-research course for those who wish to prepare as special teachers of geography. Some special line of work will be pursued by each student under the direction of the instructor. Prerequisite: Courses 3 and 4.

New York. COLUMBIA UNIVERSITY. Physical geography and its economic aspects, with lectures, laboratory and field excursions, in charge of Prof. McFarlane and an assistant. The physiographic excursion in the western United States in charge of Prof. D. W. Johnson and an assistant was noticed in the *Bulletin* (April, p. 283).

TEACHERS COLLEGE. Prof. Dodge will give a course on human geography in elementary schools, the purpose being to show how the modern viewpoint in geography will be brought into school work and school geography enriched and vitalized through emphasis of human geography. Miss Kirchwey will have charge of courses in the teaching of geography in the lower and upper grades, the teaching of regional geography in the junior high school, and general geography for elementary schools with lectures, required readings and discussions.

CORNELL UNIVERSITY. Cornell will have a summer session of six weeks beginning July 5. The faculty will include Prof. Frank Carney of Denison University, Ohio, Assistant Prof. O. D. von Engeln of Cornell, Mr. E. D. Elston, Mr. J. S. Hook, and Mrs. G. E. Monnett. The course includes elementary physical geography, geography of North America, industrial geography, materials of geography, elements of geology, elementary mineralogy and lithology, lecture courses, and laboratory and field instruction in physical geography, elementary geology, mineralogy and lithology. Lecture and laboratory courses will also be offered in meteorology and illustrated lectures will be given by different members of the department.

North Dakota. THE UNIVERSITY OF NORTH DAKOTA, Grand Forks. Summer courses are to be given in July and August at the biological station at Devils Lake, where there are exceptional opportunities for field work in physiography and geology, especially in the study of glacial deposits and of the life history of lakes as recorded in their cliffs, beaches, and other shore features. Two courses are offered, one an elementary course in college physiography, with emphasis on practical field work and methods of teaching, and the other a first course in field geology and physiography for more advanced students. Both courses are in charge of Assistant Prof. Howard E. Simpson.

Ohio. DENISON UNIVERSITY. Miss Bertha Henderson, Chicago, will conduct courses in geography for grammar grades and on North America and geography for primary grades.

OBERLIN COLLEGE. Professor G. D. Hubbard will continue with students the work of topographic surveying, giving them practical experience among the mountains with plane table, transit and level, in the method of making topographic maps. Their camp will be pitched well up in the Appalachians of southwestern Virginia. Similar work was done under his direction in adjacent areas in previous summers.

Washington. UNIVERSITY OF WASHINGTON, Seattle. Prof. W. M. Gregory of the Cleveland Normal School will give two courses in geography in the summer school.

Wisconsin. UNIVERSITY OF WISCONSIN, Madison. The geographical and allied courses in the summer school include: (a) elementary geology, (b) applied geology, by Prof. Steidtmann; (a) commercial and industrial geography, (b) physical and applied geography, by Prof. Whitbeck; (a) geography of Europe, (b) influence of geography on American history, by Prof. Williams; advanced geography (research), by Prof. Whitbeck; field course in physiography and geology (Aug. 2-28), by Prof. Williams. The field course will cover four weeks after the summer session. Students who take this will give all their time to a study of the Baraboo District northwest of Madison.

PERSONAL

Prof. Wallace W. Atwood of Harvard University will continue, this summer, his systematic survey of the San Juan Mountains of southwestern Colorado under the auspices of the U. S. Geological Survey.

Mr. William Churchill, a corresponding member of our Society and Associate Editor of the *Bulletin*, has been appointed Research Associate in Primitive Philology of the Carnegie Institution of Washington.

Prof. W. M. Davis will be engaged this summer in writing the report on his Shaler Memorial study of coral reefs.

Prof. George D. Hubbard of Oberlin College, after August 5, will renew his service for the Ohio Geologic Survey partly in the field, but most of his time will be given to writing a report on the physiography of Ohio.

Prof. D. W. Johnson of Columbia University lectured on the ''Physiography of Western Europe as a Factor in the War'' at the Rochester Academy of Science on March 29; at the Case School of Applied Science, Cleveland, on March 30; at Denison University, Granville, on March 31; at the annual meeting of the High School teachers of Michigan, Ann Arbor, on April 1; and at Johns Hopkins University on April 8. On April 7 he lectured on the ''Physical History of the Grand Cañon District'' before the Natural History Society of Harrisburg, Pa.

Mr. George J. Miller of the State Normal College, Mankato, Minn., is planning to spend August in studying the geographic conditions along the Grand Trunk Pacific route from Winnipeg to Prince Rupert.

Mr. Leonard O. Packard of the Boston Normal School, in cooperation with the Department of Efficiency of the Boston Public Schools, has been conducting geography tests in the elementary and high schools of Boston. One purpose is to learn the possibilities of estimating, by means of tests, the efficiency of geography teaching in the schools. He will spend a part of the summer in studying the data thus obtained.

As Sheldon Fellow, sent out by the Department of Geology at Harvard, Dr. Sidney Powers is now engaged in a six months' study of geological and geographical problems in Hawaii.

Mr. Howard E. Simpson, Asst. Prof. of Geology at the University of North Dakota, will, this summer, make a physiographic survey of the islands of Devils Lake, the State Bird Reserve, and if time permits a similar survey of the islands in Stump Lake, the National Bird Reserve. His department hopes to complete, this summer, its study and mapping of the shore lines of Lake Minnewaukon and Devils Lake.

Mr. Philip S. Smith, early this year, was transferred from the Division of Alaskan Mineral Resources of the U. S. Geological Survey to the position of Administrative Geologist. This work will require his being in Washington practically the entire year, as in the absence of the Director he will serve as acting Director.

Mr. Walter S. Tower of the University of Chicago will spend the summer on our Pacific coast and in the northwestern section of Canada. He hopes in Canada to visit the new regions recently opened by railroad extensions, with a view of determining the influences of geography on the various aspects of their development.

Mr. Eugene Van Cleef of the State Normal School, Duluth, Minn., will continue the study of climate in relation to the muskeg (peaty) soil of northeastern Minnesota. The local climate will also be studied with reference to the establishment of a hospital there for sufferers from tuberculosis of the bone. Insolation and solar intensity are two fundamental problems involved.

Prof. R. DeC. Ward of Harvard University, will spend the summer vacation in New Hampshire, working on his ''Climatology of the United States.''